

Chapter 25

Monitoring the Host Module

You monitor and maintain the M40e and M160 router host module—the Routing Engine and the Miscellaneous Control Subsystem (MCS)—which constructs routing tables, performs system management functions, and generates the SONET/SDH clock signal for SONET/SDH interfaces. (See Table 82.)

Table 82: Checklist for Monitoring the Host Module

Monitor Host Module Tasks	Command or Action
Understanding the Host Module on page 341	
Checking the Host Module Status on page 344	show chassis craft-interface
Checking the Routing Engine Status on page 345	show chassis routing-engine
Checking the MCS Status on page 346	show chassis environment mcs

Understanding the Host Module

Purpose	Inspect the host module to ensure that the Routing Engine and Miscellaneous Control Subsystem (MCS) function properly.
What Is a Host Module	<p>The host module is present on M40e and M160 routers. The host module constructs routing tables, performs system management functions, and generates the SONET/SDH clock signal for SONET/SDH interfaces.</p> <p>The host module is comprised of two components: the Routing Engine and the MCS. For a host module to function, both of these components must be installed and operational.</p>

Figure 140 shows the Routing Engine component of the host module.

Figure 140: Routing Engine Component

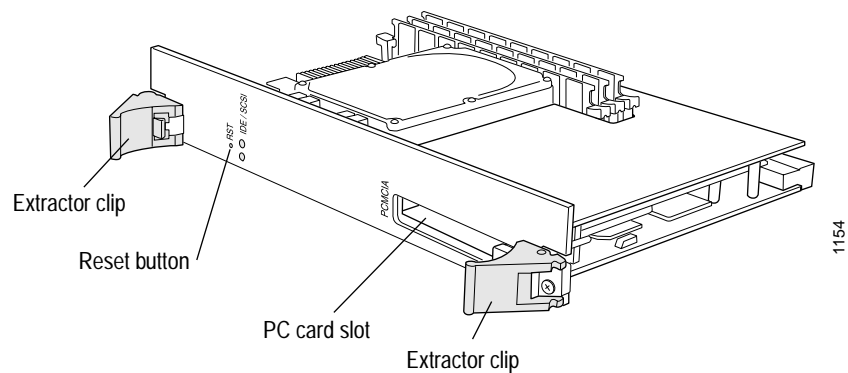
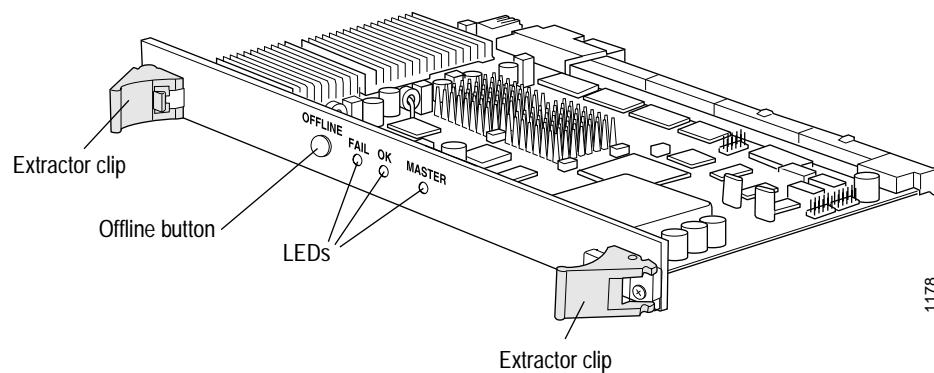


Figure 141 shows the MCS component of the host module.

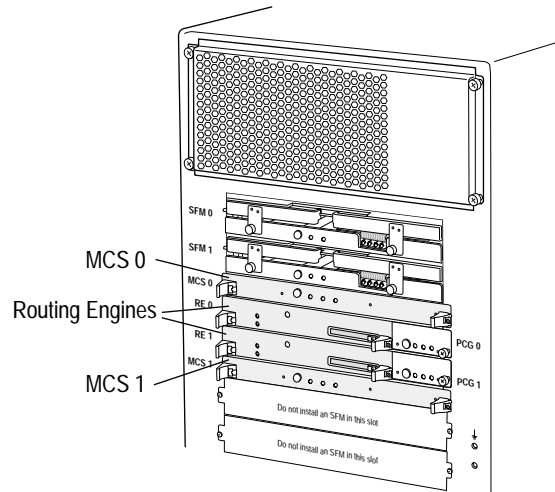
Figure 141: MCS Component



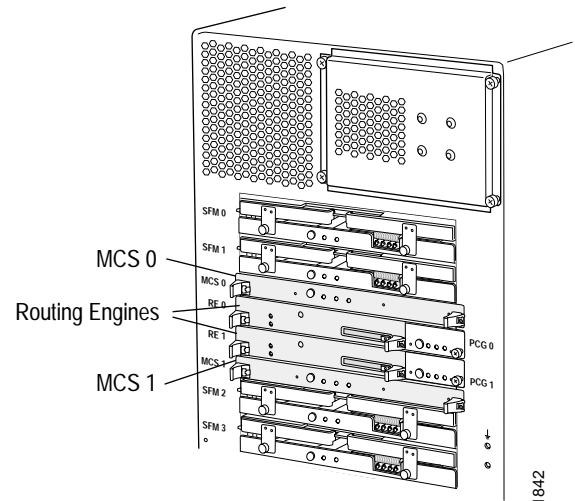
One or two host modules can be installed into the midplane from the rear of the chassis (see Figure 142). The Routing Engine (slot RE0) is below the MCS slot (MCS0), while slot RE1 is above the MCS1 slot. RE0 must use MCS0 and RE1 must use MCS1 or the circuit will not be connected.

Figure 142: M40e and M160 Router Host Module Location

M40e router rear



M160 router rear



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This chapter provides basic information about monitoring the Routing Engine and the MCS. For more detailed information about monitoring the Routing Engine, see “Monitoring the Routing Engine” on page 125. For more detailed information about monitoring the MCS, see “Monitoring the MCS” on page 359.

See Also Monitoring the Host Module on page 341

Monitoring the MCS on page 359

Monitoring Redundant Routing Engines on page 491

Monitoring Redundant MCSs on page 567

Checking the Host Module Status

Action To check the host module status, use the following JUNOS software command-line interface (CLI) operational mode command:

```
user@host> show chassis craft-interface
```

Output user@host> show chassis craft-interface

```
[...Output truncated...]
Front Panel System LEDs:
Host  0  1
-----
OK    *  .
Fail  .  .
Master *  .

[...Output truncated...]
```

What It Means (M40e and M160 routers) The Front Panel System LEDs show the Routing Engine Host 0 and Host 1 LED state. The state can be OK, Fail, or Master. An asterisk (*) indicates the operating state.

Alternative Action Look at the LEDs on the craft interface.

The host module LEDs are located on the upper right corner of the craft interface. Two sets of LEDs indicate the host module status: the set labeled HOST0 reports the status of the Routing Engine in slot RE0 and the MCS in slot MCS0, while the set labeled HOST1 reports the status of the Routing Engine in slot RE1 and the MCS in slot MCS1. Each set includes three LEDs: MASTER (green), ONLINE (green), and OFFLINE (red).

Figure 143 shows the M40e and M160 router craft interface LEDs.

Figure 143: M40e and M160 Router Host Module LEDs on the Craft Interface

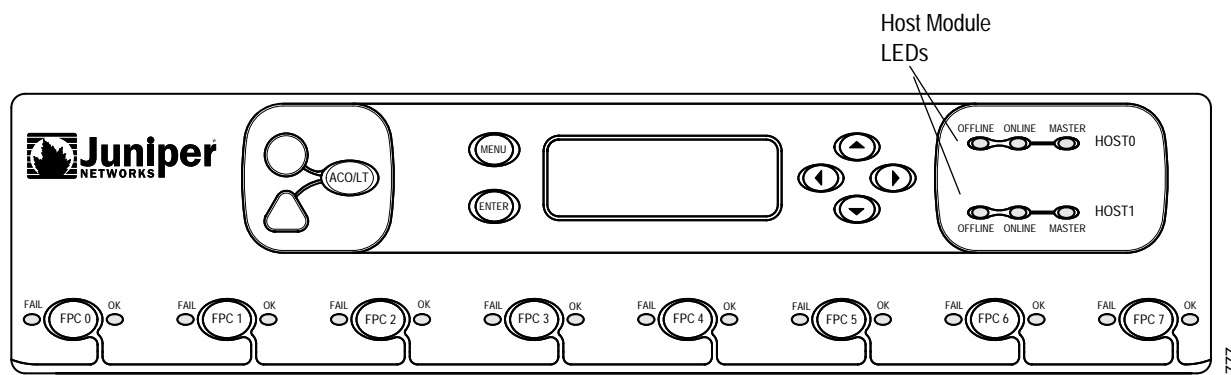


Table 83 describes the M40e and M160 router host module LED states.

Table 83: M40e and M160 Router Host Module LEDs

Label	Color	State	Description
MASTER	Green	On steadily	Host module is functioning as master.
ONLINE	Green	On steadily	Host module components (Routing Engine and MCS) are installed and functioning normally.
		Blinking	Host module is starting up.
OFFLINE	Red	On steadily	One or both host module components are not installed or have failed.

Checking the Routing Engine Status

This section provides a brief description of monitoring the Routing Engines as part of the host module on M40e and M160 routers. For more detailed information about monitoring the Routing Engine, see “Monitoring the Routing Engine” on page 125.

Action To check the Routing Engine status, use the following CLI command:

```
user@host> show chassis routing-engine
```

Output

```
user@host> show chassis routing-engine
Routing Engine status:
  Temperature      22 degrees C / 71 degrees F
  DRAM             768 Mbytes
  CPU utilization:
    User           0 percent
    Background     0 percent
    Kernel         0 percent
    Interrupt      0 percent
    Idle           100 percent
  Model            teknor
  Serial ID        4d0000062b049501
  Start time       2002-04-29 11:18:31 PDT
  Uptime           5 hours, 20 minutes, 17 seconds
  Load averages:   1 minute  5 minute 15 minute
                  0.06     0.03   0.00
```

What It Means The command output displays the Routing Engine slot number, current state (Master, Backup, or Disabled), election priority (Master or Backup), and the airflow temperature. The command output also displays the total DRAM available to the Routing Engine processor, the CPU utilization percentage, and the Routing Engine serial number for the slot. Additionally, the command output displays when the Routing Engine started running, how long the Routing Engine has been running, and the time, uptime, and load averages for the last 1, 5, and 15 minutes.

Check the Uptime to ensure that the Routing Engine has not rebooted since it started running.

Checking the MCS Status

This section provides a brief description of monitoring the MCS as part of the host module on M40e and M160 routers. For a more information about monitoring the MCS, see “Monitoring the MCS” on page 359.

Action To monitor the MCS status, use the following CLI command:

```
user@host> show chassis environment mcs
```

Output user@host> **show chassis environment mcs**

```
MCS 0 status:
State           Online Master
Temperature     43 degrees C / 109 degrees F
Power:
3.3 V           3318 mV
5.0 V           4974 mV
12.0 V          11824 mV
5.0 V bias      4974 mV
8.0 V bias      8212 mV
BUS Revision    12
FPGA Revision   13
MCS 1 status:
State           Online Standby
Temperature     58 degrees C / 136 degrees F
Power:
3.3 V           3317 mV
5.0 V           5006 mV
12.0 V          11843 mV
5.0 V bias      4998 mV
8.0 V bias      8195 mV
BUS Revision    12
FPGA Revision   255
```

What It Means The show chassis environment mcs CLI command is available on the M40e and M160 routers only. The command output displays environmental information about both MCSs installed in the router or about an individual MCS. It displays the MCS status: Present, Online, Offline, or Empty. The command also indicates whether the MCS is master. The command output displays the temperature of the air flowing past the MCS, information about MCS power supplies, field programmable gate array (FPGA) revision information, and the revision level of the chassis management bus (CMB) slave.